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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/730,962

12/09/2003

Chandra Kumar Banerjee

00568-290996

3681

7590 01/19/2007
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EXAMINER

EDEL, JOHN B

ART UNIT

PAPER NUMBER

1731

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/730,962

Applicant(s)

BANERJEE ET AL.

Examiner

John B. Edel

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 19-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

(1)

Applicant's election with traverse of Group I in the reply filed on November 27, 2006 is acknowledged. The traversal is on the ground(s) that there is no burden on the examiner. This is not found persuasive because the inventions have acquired a separate status in the art and would require separate searches.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

(2)

Hereinafter, the format "26 [...]" is a double citation referring the reader to Applicants claim number (underlined) and prior art being cited (in brackets).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language of claim 3 is such that it cannot be definitively determined whether applicant intends to claim particles comprising:

- 1) Any of the various listed metals or mixtures of the various metals
or
- 2) A mixture of all of the enumerated metals.

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For the purposes of compact prosecution the claim will be interpreted as requiring the first interpretation listed.

Claim Rejections - 35 USC § 102

(3)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

...

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 5,789,337 to Haruta et al. ("Haruta").

Haruta teaches:

A metal oxide substrate 1 & 2 [abstract]

Ultrafine gold particles 1 & 3 [abstract]

Claims 4-11 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Pre-Grant Publication No. US 2003/0131859 A1 to Li et al. ("Li").

It is notoriously well known in the art of cigarette making:

To make cigarette filters from cellulose acetate (which contains carbon) 6

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Li teaches:

A rod of aerosol generating material 4

A filter element coupled to a first end of the rod 4

At least one catalyst composition comprising ultrafine particles 4

The catalyst (Fe_2O_3) converts carbon monoxide to carbon dioxide below 150°C 4

The catalyst composition is located in the rod of the aerosol generating material 8

The catalyst composition/ adsorbent¹ is located in the filter 5, 7, & 11

The catalyst composition is located adjacent to the heat source 10

- [Abstract; Figure 3; paragraph 55; paragraph 85]

The smoking article comprises a heat source 9 [paragraph 45]

The composition comprises a plurality of ultrafine particles positioned on a substrate (tobacco) 12 [Paragraph 84]

Claim Rejections - 35 USC § 103

(4)

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

¹ United States Pre-Grant Publication No. 2005/0263164 A1 to Reddy et al. teaches that Fe_2O_3 can adsorb carbon monoxide [paragraph 26] making adsorption an inherent in the prior art.

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Claims 12-18 and 23-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Li in view of Haruta. Haruta discloses what Li fails to disclose expressly, namely:

A plurality of ultrafine gold (a noble metal) particles are positioned on a substrate 12 & 15 [abstract]

The substrate is alumina 13 & 14 [col. 2 lines 55-67]

The noble metal has an average particle size between 2 and 4 nanometers 16-18 [col. 2 lines 45-60]

An article of manufacture comprising the catalyst composition described in claim 1 (a cigarette) 23 [see treatment of claims 1-3 and 12-18]

A filter element comprising a catalyst composition of claim 1 24 [see treatment of claims 1-3 and 12-18]

Li and Haruta are analogous because both relate to the removal of carbon dioxide from fluids. At the time of invention it would have been obvious to utilize the catalyst of Haruta as the catalyst in the cigarette of Li because Haruta teaches a catalyst with high activity for oxidizing carbon monoxide [abstract] that is a goal of Li [abstract]. Therefore, it would have been obvious to combine Haruta with Li to obtain the invention as specified in Claims 12-18.

(5)

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li and Haruta as applied to claims 12-18 above, and further in view of United States Patent No. 5,727,573 to Meier et al. ("Meier"). Meier discloses what Li and Haruta fail to disclose expressly, that adsorbents may be added to the filler and to the filter 7 [abstract]. Meier is analogous to Li because Meier relates to removing harmful constituents from mainstream smoke. At the time of invention would be obvious to incorporate the adsorbents of Meier into the filter of Li because doing so would reduce

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harmful products in mainstream smoke [abstract of Meier]. Therefore, it would have been obvious to Meier with Li and Haruta to obtain the invention as specified in claim 7.

Conclusion

(6)

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is as follows:

United States Patent No. 5,211,684 to Shannon et al.

United States Patent No. 5,040,551 to Schlatter et al.

Both of these patents may be applied to the present application in a similar manner as Li above.

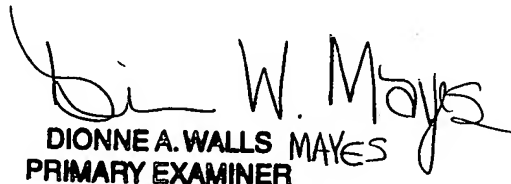
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Edel whose telephone number is (571) 272-4804. The examiner can normally be reached on 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JBE


DIONNE A. WALLS MAYES
PRIMARY EXAMINER